Garmin International, Inc.
1200 E. 151st Street
Olathe, Kansas 66062 U.S.A.

FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT

for the

GARMIN G600 SYSTEM WITH REDUCED VERTICAL SEPARATION MINIMUM (RVSM) CAPABILITY

as installed in

TBM 700 (A, B, C1, C2, and N [850])

Registration Number: _____ Serial Number: _____

This document serves as an Airplane Flight Manual Supplement when the aircraft is modified in accordance with Supplemental Type Certificate SA02153LA-D for RVSM group airworthiness approval with the Garmin 600 system. This document must be carried in the airplane at all times.

The information contained herein supplements or supersedes the information in the approved Airplane Flight Manual / Pilot's Operating Handbook only in those areas listed herein. For limitations, procedures and performance information not contained in this document, consult the basic Airplane Flight Manual / Pilot's Operating Handbook or other applicable supplements.

FAA APPROVED BY: _____

Michael Warren
ODA STC Unit Administrator
GARMIN International, Inc
ODA-240087-CE

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LOG OF REVISIONS			
Rev	**Section**	**Description**	**FAA Approval**
1	All	Complete Supplement	Not FAA Approved
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Section 1. **GENERAL**

1.1 **Applicability**

This supplement applies to TBM 700/850 aircraft which have been modified for Reduced Vertical Separation Minimum (RVSM) in accordance with Supplemental Type Certificate (STC) SA02153LA-D. It applies to TBM 700/850 aircraft which have been modified in accordance with Appendix P of the G600 AML STC Installation Manual for RVSM flight operations.

For general limitations, procedures and performance information on the G600 system refer to the G600 AFMS (Garmin part number 190-00601-01).

NOTE

The basic G600 AFMS includes limitations and procedures for the altitude preselector.

1.2 **RVSM Group Airworthiness Approval**

Aircraft equipped with this modification have been evaluated in accordance with 14 CFR Part 91, Appendix G, "Operations in Reduced Vertical Separation Minimum (RVSM) Airspace," and FAA Advisory Circular 91-85, "Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum Airspace," and are qualified for RVSM operations as a group aircraft. This finding does not constitute approval to conduct RVSM operations. Additional approval to conduct RVSM operations may be required by the local aviation authority.

1.3 **Description**

The RVSM configuration consists of the following equipment:

- GDU 620 Primary Flight Display (PFD)
- GDC 74B Air Data Computer (ADC 1)
- GAD 43e adapter
- AM-250 altimeter / air data computer (ADC 2)
- ADC 1-2 selector switch
- KFC 275/325 autopilot system
- Transponder 1
- Transponder 2 (optional)

A block diagram of the configuration is shown in Figure 1-1.

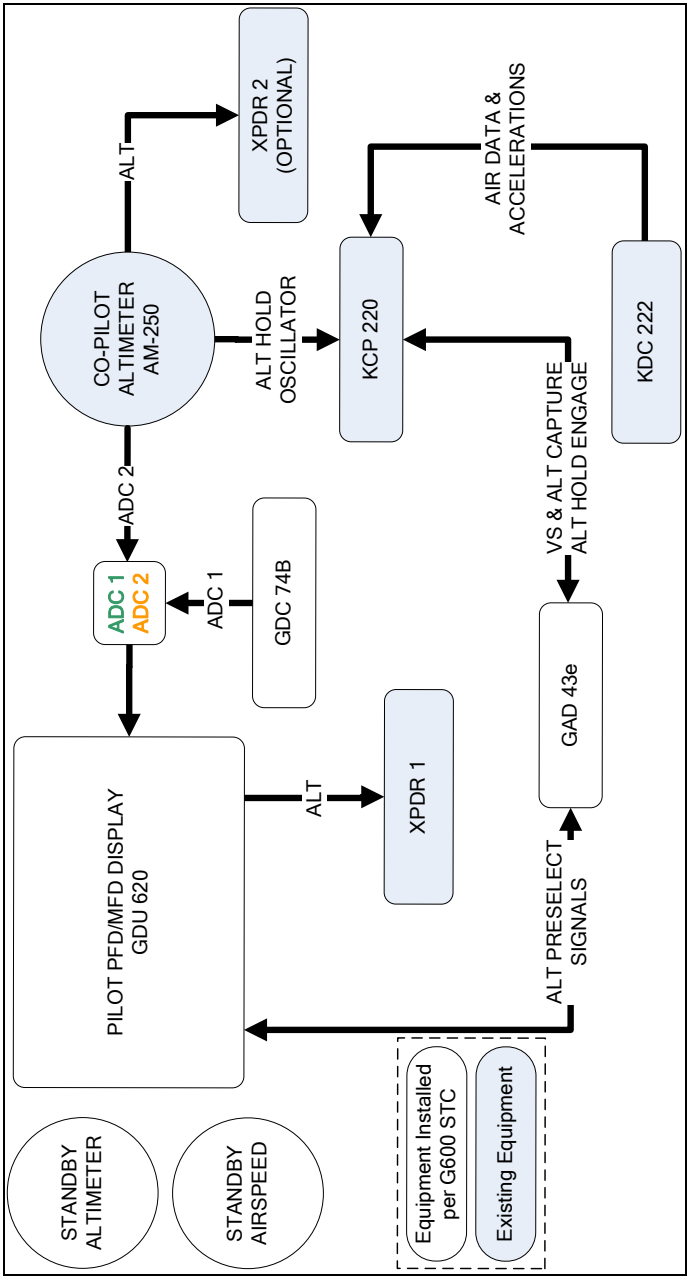

Figure 1-1 RVSM equipment block diagram

1.4 **Definitions**

The following acronyms are used within this document:

ADC: Air Data Computer
GPS: Global Positioning System
IFR: Instrument Flight Rules
KOEL: Kinds of Operation Equipment List
OAT: Outside Air Temperature
PFD: Primary Flight Display
RVSM: Reduced Vertical Separation Minimum
TAS: True Air Speed

Section 2. **LIMITATIONS**

2.1 **Static Ports**

RVSM operations are not permitted if the static ports are damaged or if there is damage or surface irregularities within the RVSM critical area.

NOTE

The RVSM critical area encompasses approximately 18 inches forward and 8 inches above/below/aft of the static ports. If damage or surface irregularities are suspected to be within this area, consult maintenance personnel.

2.2 **ADC 1-2 Switch**

During normal operations, the ADC 1-2 switch must be selected to the ADC 1 (green) source. Selection of the ADC 2 (amber) source is only permitted during system testing and emergency procedures.

2.3 **Required Equipment**

The following equipment must be operational before initiating RVSM flight operations:

- Garmin G600 equipment installed in the pilot's instrument panel
- AM-250 altimeter installed in the copilot's instrument panel
- Autopilot system including altitude hold function
- ADC 1-2 switch
- One (1) transponder with altitude reporting function

Section 3. **EMERGENCY PROCEDURES**

3.1 **Emergency Procedures**

NOTE

The ADC failure procedures in this AFMS supersede the ADC failure procedure in the basic G600 AFMS.

3.1.1 ADC 1 Failure

ADC 1 failure is indicated by a red X and yellow text over the airspeed, altimeter, vertical speed, TAS and OAT displays on the PFD. Wind calculations will also be unavailable. If valid GPS data is available, the PFD will automatically display GPS altitude relative to mean sea level above the altitude tape. If the GAD 43e is providing attitude to the autopilot, a yellow "CHECK ATTITUDE" banner will be displayed on the PFD and the autopilot will disconnect.

1. Monitor AM-250 altimeter to maintain assigned altitude. Refer to standby airspeed indicator for airspeed reference.

2. Select ADC 2 for display on PFD using ADC 1-2 switch.

   When ADC 2 data is displayed on PFD, the PFD may be used for altitude, airspeed, and vertical speed references. The PFD altitude alerter function will be restored. TAS, OAT, and wind calculations will remain unavailable. If the GAD 43e is providing attitude to the autopilot, the "CHECK ATTITUDE" banner will remain displayed on the PFD and the autopilot will be inoperative.

3. Execute RVSM contingency procedures for the following:
   - Loss of one primary altimetry system.
   - Loss of all automatic altitude hold systems (if "CHECK ATTITUDE" is displayed on PFD).

3.1.2 ADC 2 Failure

ADC 2 failure is indicated as blank, "----," or "FAIL" text in place of the normal altitude readout on the AM-250 LCD display. Automatic altitude control mode will be inoperative.

1. Disengage the autopilot and maintain assigned altitude manually by reference to the PFD altimeter.

2. If Transponder #2 is installed and selected, select Transponder #1.

NOTE

If Transponder #1 is inoperative (per MEL), continue to operate Transponder #2 (if installed) without altitude reporting (stop altitude squawk).

3. Execute RVSM contingency procedures for the following:
   - Loss of one primary altimetry system.
   - Loss of all automatic altitude hold systems.
   - Loss of altitude reporting (if Transponder #1 is inoperative).

3.1.3 ADC 1 and ADC 2 Failure

ADC 1 and ADC 2 failures are indicated as described in procedures 3.1.1 and 3.1.2.

1. Disengage the autopilot and maintain assigned altitude manually by reference to the standby altimeter.

2. Execute RVSM contingency procedures for the following:
   - Loss of all primary altimetry systems.
   - Loss of all automatic altitude hold systems.
   - Loss of altitude alerting.
   - Loss of altitude reporting.

3.1.4 Difference in Primary Altimeters

If the primary altimeters (PFD and AM-250) differ by 200 feet or more, attempt to identify the incorrect primary altimeter.

WARNING

The standby altimeter uses the same static source as the AM-250 (ADC 2). The standby altimeter does not have static source error correction applied and will therefore differ slightly from the primary altimeters during normal operation. Do not use the standby altimeter as the only means of determining the incorrect altimeter.

1. Verify all altimeters (both primary altimeters and standby) are set to the correct altimeter setting (e.g 29.92 inHg).

2. Attempt to identify the incorrect primary altimeter:

   If the PFD altimeter (ADC 1) is determined to be incorrect:
   - Perform procedure 3.1.1, ADC 1 Failure.

   If the AM-250 altimeter (ADC 2) is determined to be incorrect:
   - Perform procedure 3.1.2, ADC 2 Failure.

   If unable to determine which primary altimeter is incorrect:
   - Perform procedure 3.1.3, ADC 1 and ADC 2 Failure.

3.1.5 PFD Failure (RVSM considerations)

WARNING

This procedure is to be performed in addition to the PFD 1 Failure procedure in the basic G600 AFMS. This procedure only addresses RVSM considerations for PFD failure.

In addition to the loss of flight instruments, PFD failure will result in the loss of altitude alerting and Transponder #1 altitude reporting.

1. Monitor AM-250 altimeter to maintain assigned altitude (using autopilot or manual control).
2. Select Transponder #2 (if installed).

NOTE

If Transponder #2 is not installed or inoperative (per MEL), continue to operate Transponder #1 without altitude reporting (stop altitude squawk).

3. Execute RVSM contingency procedures for the following:
    - Loss of one primary altimetry system.
    - Loss of altitude alerting.
    - Loss of altitude reporting (if Transponder #2 is not installed or inoperative).

3.2 Abnormal Procedures

3.2.1 Loss of Altitude Reporting

If loss of transponder altitude reporting is suspected or reported:

1. Select other transponder for operation (if installed and operative).

If other transponder is not installed or inoperative (per MEL):

2. Continue to operate installed/operative transponder without altitude reporting (stop altitude squawk).
3. Execute appropriate RVSM contingency procedure for loss of altitude reporting.

3.2.2 Loss of Automatic Altitude Hold

If the autopilot or altitude hold mode fails for any reason (e.g loss of attitude, servo failure, or trim failure):

1. Disengage autopilot and maintain assigned altitude manually using available primary or standby altimeters.

2. Execute appropriate RVSM contingency procedure for loss of all automatic altitude hold systems.

3.2.3 Loss of Altitude Alerting

NOTE

This procedure applies to loss of altitude alerting due to an inability to select the desired altitude or loss of altitude alert tones. Refer to PFD or ADC failure procedures for other failure scenarios.

1. Engage autopilot altitude hold mode at assigned altitude.

2. Monitor primary altimeters while maintaining assigned altitude.

3. Execute appropriate RVSM contingency procedure for loss of altitude alerting.

Section 4. **NORMAL PROCEDURES**

The normal procedures in this section are for RVSM flight operations and are in addition to all other normal procedures specified in the basic AFM/POH or applicable supplements.

4.1 **Preflight Inspection**

1. Visually inspect the static ports and the RVSM critical region for damage or surface irregularities.

4.2 **Before Takeoff**

1. Select ADC 2 (amber) using ADC 1-2 switch.
    a. Verify that PFD altitude matches AM-250 altitude.
    b. Verify that PFD airspeed and vertical speed tapes are indicating correctly (approximately zero).

NOTE

If the GAD 43e is providing attitude to the autopilot, a yellow "CHECK ATTITUDE" banner will be displayed on the PFD while ADC 2 is selected.

2. Select ADC 1 (green) using ADC 1-2 switch.

3. Check both primary altimeters and standby altimeter.
    a. With all altimeters using same altimeter setting, the difference between the highest and lowest altimeter must not exceed 80 feet.

4.3 **Cruise**

1. Set PFD altitude alerter to assigned altitude.

2. Engage automatic altitude hold mode.
    a. Refer to autopilot AFM and basic G600 AFMS for autopilot and altitude preselect procedures.

3. Cross-check altimeters.
    a. Verify altimeter settings (e.g 29.92 inHg).
    b. Note differences between primary and standby altimeters in accordance with RVSM procedures.

NOTE

Difference between primary altimeters must be less than 200 feet.

Section 5. **PERFORMANCE**

No change.

Section 6. **WEIGHT AND BALANCE**

No change.

Section 7. **DESCRIPTION**

7.1 **Pitot-Static System**

The pitot-static instruments that are part of this RVSM configuration are connected to the sources specified in the following table.

Instrument	**Pitot Source**	**Static Source**
ADC 1 (GDC 74B)	Pitot 1	Static 1 / Emergency*
ADC 2 (AM-250)	Pitot 2	Static 2
Pilot's Standby Altimeter	N/A	Static 2
Pilot's Standby Airspeed	Pitot 2	Static 2

* Source is selected by the emergency static valve

Sources for other instruments are unchanged by this modification.

7.2 **Transponder Altitude Sources**

Transponder #1 receives altitude data from the G600 PFD and will report the pressure altitude from the source that is displayed on the PFD. In normal operations, Transponder #1 will report the pressure altitude from ADC 1. If ADC 2 is selected for display on the PFD, then Transponder #1 will report the pressure altitude from ADC 2.

Transponder #2 (if installed) receives altitude data from the AM-250 (ADC 2). Transponder #2 will always report the pressure altitude from ADC 2.

Section 8. **HANDLING, SERVICING AND MAINTENANCE**

Instructions for Continued Airworthiness are contained in Garmin document number 190-00601-00, Revision K or later.